

TITLE OF INVENTION

VESSELS FOR MULTICOMPONENT PRODUCTS

## SPECIFICATION

## BACKGROUND OF THE INVENTION

## FIELD OF INVENTION

The Invention ~~concerns~~refers to containers ~~utilizing~~in which there can be stored several ~~components~~, components different in structure and/or in their aggregative state, mixed immediately before ~~consumption~~use to be preserved for a long period of time and to create the effect of freshly ~~mixed~~prepared food ~~stuffs~~products, healthcare products, cosmetics, chemical agents, etc.

PREVIOUS LEVEL OF ENGINEERING

Different types of the design of reservoirs-vessels intended for storage of various substances and their mixtures in given proportions are widely known in science and engineering technology.

Thus, for example, it is known a device of a bottle cover for ~~dosed-out~~ dosed introduction of liquid or solid substances into a liquid (US Patent No. ~~Patent US № 6561232; МПК B65B~~ IPC B65B 03/04; published 13.05.2003). It ~~consists-consisting~~ of a container ~~for the-for~~ for a basic component, a cover ~~with-the~~ with a chamber filled with a substance under pressure, one or more tubular containers filled with a liquid or solid introduced component. ~~The, the~~ the device is also ~~supplied-provided~~ with a disrupting element. The above-mentioned device uses a complex multistage system of containers, put into action after the chamber in the cover is depressurized, and the working volume of the introduced component is limited by the construction ~~of a-of~~ of the tubular container.

It is also known is a device of the of a separate container (Patent US No. US Patent No. 3856138; MFK B65D81/32C+IPC B65D81/32C1; published in 1974). The device is a reservoir, representing a vessel consisting of a receptacle and a container, which are laid placed concentrically to each other and are and sealed with a bottom plug of the receptacle. The cover has a screwed is provided with a threaded joint. The container is structurally designed with the with an open bottom. When a cover is being removed, Removal of the cover results in that the

container, ~~connected to it,~~ connected thereto leaves the sealed joint with the bottom ~~plug; plug,~~ which in turn results in mixing ~~up the~~ of the components from the container and the receptacle.

5 This device can be used only if the container is removed from the receptacle. ~~Thus, thus,~~ laying-out arrangement of the container along ~~all the~~ height of the receptacle does not ~~make it possible~~ allow to mix the components at the moment of putting the device into operation.

From the technical point of view, the closest prior art to the present invention is the device for mixing up fluid and liquid fluids and liquids (Patent RU 10 ~~№RU-Patent No. 2146641; МПК—B65D81/32~~ IPC B65D81/32; published 29.07.1996) ~~is the closest to the above mentioned device. It was,~~ chosen as the prototype ~~and it consists,~~ consisting of the ~~first a~~ receptacle for a liquid with an entry opening, closed with a cover and the second receptacle for a fluid, fitted arranged into the upper part of the first receptacle, the external housing of the 15 second receptacle with a breaking element in the form a pin, the connecting pipe and the drain pipe submerged into a liquid. The specified device operates as follows: initially it is necessary to wind up the cover till it stops, the second receptacle moves ~~downward~~ downwardly, the pin breaks a membrane of the second receptacle. ~~Then,, then the cover must be turned turn-in the opposite~~ 20 direction ~~the cover right about so that,~~ the second receptacle moves upwards. ~~Under pressure,~~ the fluid from the second receptacle ~~goes-moves~~ moves under pressure through the system of channels into the receptacle with a liquid ~~through the system of channels. After that,~~ afterwards it is necessary to remove the empty second receptacle and the external housing ~~with a~~ with the breaking element. The 25 above-mentioned device is not widely used as it has limited functional capabilities and ~~rather a~~ rather complex design construction. The device can be used only after performing several sequential operations; ~~however,~~ thereby, the process of mixing up is irreversible, i.e. the ~~consumer-user~~ does not have-an have the opportunity to manage the process of mixing ~~up the~~ components at his own discretion.

## SUMMARY OF THE INVENTION

The ~~offered invention aims at developping of the reservoir for the aim of the~~  
proposed invention is the development of a vessel for multicomponent products,  
providing ~~the~~ for reliability of its ~~design~~ construction; easy and secure  
5 depressurization of the container with an introduced component; reduction of  
actions to ~~perform~~ be performed ~~to activate the process of mixing up~~ mixing  
process; ~~removal~~ release of the end-product without the removal of the container;  
creation of ~~the~~ new functional capabilities, allowing to manage the process of  
mixing up the components. Achievement of the set aims will provide ~~the~~ for an  
10 easy use of the device, including the possibility to ~~model~~ modify parameters of the  
end product just before using it for its intended purpose.

\_\_\_\_\_ The set aim is achieved ~~as follows: the reservoir in that the vessel for~~  
multicomponent products contains a receptacle ~~for the~~ for a basic component, a  
~~demountable~~ cover having a plug connection with the receptacle, a container for  
15 the introduced component, ~~fitted into~~ arranged in the upper part of the receptacle,  
~~It also has,~~ provided with at least, ~~least~~ one channel for the output of the end  
product; additionally the container is provided with at least one opening; ~~There is,~~  
~~at least, one hole in the container;~~ additionally there provided is a valve closing  
the ~~hole~~ opening of the container. ~~The;~~ the container and the valve are connected  
20 ~~with the possibility to be displaced~~ displaceable ~~one from the~~ relative to each other  
~~along the~~ along guide members. ~~The;~~ the cover can interact with the container and  
the valve.

The ~~offered reservoir~~ proposed vessel differs from the prototype in  
~~following;~~ that it contains, contains at least, ~~least~~ one channel for the output of the  
25 end product. ~~There is,;~~ the container is provided with at least, ~~least~~ one ~~hole in the~~  
~~container~~ opening; ~~additionally there provided~~ is a valve closing the ~~hole~~ opening  
of the container. ~~The;~~ the container and the valve are connected ~~with the~~  
~~possibility to be displaced from~~ displaceable relative to each other along the guide  
members. The cover can be dismounted from the container ~~or the valve;~~ it and it  
30 can ~~also can~~ be fixedly connected to them.

~~Presence of, at least, one hole~~Provision of at least one opening in the container allows easy and safe depressurization of the container, which does not demand ~~require~~ breaking of a membrane. Additional installation of the valve on the container, which closes the ~~hole-opening~~ of the container, ~~provides-provides~~ for reliability of the ~~design~~construction, reduction of actions necessary to activate the ~~process of mixing-up~~mixing process. ~~Presence of, at least,~~Provision of at least one channel for the ~~output-removal~~ of the end-product provides ~~makes it possible to take out~~for release of the end-product without the removal of the container. ~~Working out of a~~Provision of the cover with the possibility of ~~interaction~~interacting with the container or the valve and also the connection of the container and the valve displaceable relative to ~~with the possibility to be displaced from each other along the guide members~~ creates-provides for some new functional capabilities, allowing ~~the possibility to~~ manage the process of mixing up ~~the~~ components and to ~~model-modify~~ parameters of the end product just before using it for its intended purpose.

~~The detachable~~Detachable—~~connection of the cover with~~with the receptacle can be made in the form of a screwed connection, a ~~retention pin~~clamp, etc.

The container can be located inside the upper part of ~~container~~receptacle, and the detachable connection with the cover can be ~~fitted onto~~arranged on the receptacle.

The container can be located ~~on the~~ outside of the upper part of the receptacle, and the valve can be ~~fitted~~arranged inside the ~~container~~container, the detachable connection with the cover is ~~located~~arranged on the container. In case ~~if the~~ container is placed ~~on the~~ outside of the upper part of the receptacle, the valve can be located on the outside of the container and the detachable connection with the cover is ~~set~~arranged on the valve.

The cover interacts with the container or the valve with its ~~internal~~inner part which can be flat or in the form of a binding element of any of the known configurations (a push bar, a toothed member, a ~~spiking~~hub, ~~an advancing~~ cam, a

~~retention pin~~ clamp, a plug connector, etc.). The cover can be fixedly connected to the container or the valve, for example, by welding in the form of a one-piece construction; ~~the or the~~ cover can be set on the valve or the container using expendable fasteners or any other known ~~ways~~ methods of fixed connection.

5        The container or the valve, respectively, can be provided with ~~the~~ binding elements - push bars, toothed members, ~~spikings~~ hubs, advancing cams, ~~retention pins, and~~ clamps, plug connectors.

      In case the valve is ~~set on the~~ arranged outside of the container, the cover ~~(with the help of the binding element)~~ fixes the container and the valve through  
10 the binding element in position ~~a position~~ when the valve closes the ~~hole~~ opening of the container. When removed, the cover transfers the movement to the container through the binding element.

      In case the valve is ~~established~~ arranged inside of the container, the cover ~~(with the help of the binding element)~~ fixes the container and the valve through  
15 the binding element in position ~~in a position~~ when the valve closes the ~~hole~~ opening of the container. When the cover is removed, the movement is transferred to the valve through the binding ~~element~~; element, the displacement of the valve results in its detachment with the ~~hole~~ opening of the container.

      Displacement of the valve and the container relative to each other ~~one from the other~~ can be carried out through the indirect action ~~of the~~ of a spring-controlled ~~unit element~~ placed between the container and the valve. As a spring element ~~Any~~  
20 any known spring ~~group~~ or a gasket can be used, made ~~from any of any~~ plastic material, ~~can be used as a spring-controlled unit P.~~ The presence of a spring-controlled ~~the spring element~~ unit allows to facilitate the process of removal of the  
25 cover due to ~~the action of~~ unclamping of the spring-controlled ~~unit element~~. ~~Forces, Forces~~ arising at this moment, ~~thereby~~ give an additional movement to the valve, which results in detachment of the valve and the ~~hole~~ opening of the container. The spring-controlled ~~unit element~~ is preferable in case if the inner part of the cover is flat.

30        Displacement of the valve and the container relative to each other ~~one from~~

~~the other~~ can be carried out through the creation of the ~~positive~~excess pressure of one of the components. In this case when the cover is removed from the container, the valve and the container are displaced ~~one from the other~~relative to each other, opening the ~~hole~~opening of the container.

5        If the valve is ~~influenced by~~affected by the ~~spring-controlled unit element~~ and/or ~~positive-excess~~ pressure of a component in the container, the cover fixes the container and the valve in position when the valve closes the ~~hole~~opening of the container. When the cover is removed, the ~~spring-controlled unit element~~ and/or ~~positive-the excess~~ pressure ~~of a of the~~ component in the container  
10       transfer the movement to the valve, which results in displacement of the valve from the ~~hole~~opening of the container.

      In case ~~of fixed~~of a fixed connection of the valve with the cover, the cover fixes the container and the valve in ~~position~~a position when the valve closes the ~~hole~~opening of the container. When the cover is displaced, ~~so is the valve~~the valve is displaced as well. ~~If~~Additional provision of a removable cap is fitted into the cover, ~~it in this case~~ facilitates the use of the ~~offered~~proposed device.

      The valve can be made in the form of an independent construction or as an element of the receptacle or the container.

      Thus, removal or displacement of ~~a cover~~the cover sets the ~~reservoir-vessel~~ in the position "~~open~~", "open", simultaneously the valve and the container are displaced ~~one from the other~~relative to each other. Displacement of the valve and the container ~~one from the other~~relative to each other results from ~~the~~ direct mechanical effect, ~~if~~when the cover is connected fixedly with the valve or the container, or through the binding element, ~~if~~when the cover is connected to the  
25       valve or the container by a detachable connection. ~~can be dismantled from the valve or the container.~~

      Opening of the ~~hole of the~~ container results from the ~~necessary~~required displacement of the container and the valve ~~one from the other~~relative to each other which is carried out through the guide members.

30       The guide members can be made in the form of an independent

construction or as parts of the receptacle, the container or the valve. The guide members can have any of the known forms, for example, the form of a ring, zigzag, ~~spiral~~helical, rectilinear, etc.

5 | The introduced component under the influence of its own weight and/or ~~positive excess pressure enters the receptacle through the hole opening in the~~  
~~container enters into the receptacle and is mixed up~~mixed with the basic component.

10 | ~~Positive Excess pressure can be achieved if there is some gas, a gas in the container, for example, carbon dioxide, dioxide. in the container. Positive Excess~~  
~~pressure can also be achieved if the hydraulic pressure is created due to the displacement of the valve and the container one from the other relative to each~~  
~~other, for example, when the valve and the container are set placed relative to each~~  
~~other in accordance with the principle of the piston~~ piston - cylinder or in case of  
15 | valve, closing the ~~hole opening~~ of the container. Creation of the ~~positive excess~~  
~~pressure can also be achieved using other known ways.~~methods.

20 | There can be one or several ~~holes openings~~ in the container. At least, one ~~hole opening is necessary to organize realize the process of mixing up~~  
~~mixing the components. Other holes~~Provision of other openings can be necessary for the  
technological purposes.

The introduced component can be in one of the following states: liquid, powder or granules.

25 | ~~Pinned In order to improve the homogeneity of mixing blades can be additionally set arranged on the parts of the container submerged into the basic~~  
~~component, on order to improve the homogeneity of mixing up. They allow~~  
~~organizing aallowing to organize the flow of liquid components when the container or the valve is displaced. The above-mentioned pinned blades are placed~~  
on the outside part of the container and the valve.

30 | The ~~reservoir, which is being patented,~~ vessel allows two possibilities of ~~mixing up~~  
~~mixing the components – the complete mixing up complete mixing~~

according to the formula of the manufacturer or dosed ~~mixing-up~~mixing according to the formula of the ~~consumer-user~~. The above-mentioned possibilities depend on the form and the position of the valve.

Uncontrolled complete ~~mixing-up~~mixing of the components according to the formula of the manufacturer is ~~made~~carried out in case if the valve opens the ~~hole~~opening of the container when the cover is removed.

Dosed ~~mixing-up~~mixing of the components ~~can be performed~~is carried out in case if the valve closes the ~~hole~~opening of the container when the cover is removed. In ~~this case,~~ case of the latter, having chosen the necessary ~~portion~~amount of the introduced component, ~~you can~~one can interrupt the process of ~~mixing-up~~mixing the components at any time by the removal the cover from the ~~reservoir-vessel~~. The valve closes the ~~hole~~ opening of the ~~in the body of the~~ container. The ~~portion~~amount of the introduced component depends on the period of time during which the ~~reservoir-vessel~~ is in the position "open". ~~Thus, the consumer can model~~This allows the user to modify parameters of the end product just before using it for its intended purpose.

In case ~~if the cover~~the cover is detachably connected to the container or to the valve ~~by detachable connection,~~ removal of the cover results in termination of interaction of ~~a cover~~the cover with the container or the valve; ~~the container rests in the reservoir~~valve, the container remains in the vessel.

If the cover is fixedly connected to the container or to the valve, the cover can remain on the ~~reservoir-vessel~~ and the ~~evacuating-release~~ of the end product is carried out through the channel intended for the output of the end product through the ~~hole~~opening in the cover with the removable cap, ~~thus,~~thereby the container remains in the ~~reservoir-vessel~~.

The end-~~product~~product prepared during ~~the mixing-up~~mixing is ~~taken out~~released from the ~~reservoir-vessel~~ through the channel. The channel can be placed between the receptacle and the container or it can be placed inside the container or inside the valve.

In order to facilitate ~~the process of taking out~~release of the end product from the



bottom of the receptacle, the ~~reservoir vessel~~ in question can additionally ~~have be~~ provided with a tube. In this case the end-product passes through this tube, which reaches the bottom part of the receptacle, ~~and, then, it and~~ passes into the channel for the output of the end product.

5 Other variants of ~~using the invention, which is being patented, are as follows:~~ realization of the patented invention are such that the end-product can pass through the outlet channel into an additional ~~hole opening arranged~~ in the cover or through ~~the removable cap of a removable cap arranged on~~ the cover.

10 Moreover, in order to provide for additional facilitation of the use of the patented vessel the upper part of the container or the valve can be made in the form of a neck ~~which can be slid out from the receptacle; that facilitates still further the use of the reservoir.~~ sliding neck.

15 If the container ~~consists from~~ is carried out with several chambers with introduced components, it is possible to ~~make~~ produce more complex multicomponent products.

20 The above-mentioned ~~versions~~ variants of the ~~offered engineering~~ proposed technical solution ~~have one whole~~ are connected by a common functional purpose. ~~They present the purpose and represent particular ways of making~~ embodiments of the valve, the container, the cover, of the guide members and their interactions in order to achieve ~~the integrated a common~~ technical result, that is to provide the result – providing for displacement of the valve and the container ~~one from the other and therefore, to put the reservoir~~ relative to each other and putting the vessel into operating condition ~~which activates~~ in order to activate the process of ~~mixing up~~ mixing the components.

25 The best ways of implementation of the invention

~~The particular versions of the reservoir~~ Particular variants of the proposed vessel for multicomponent ~~products, which is being patented,~~ products are described below with references to the enclosed ~~illustrations~~ drawings.

30 The ~~reservoir vessel~~, which is being patented, guarantees the reliability of its design; easy and secure depressurization of the container with an introduced

component; reduction of actions to perform to activate the process of mixing up, to reduce the production cost, the possibility to manage the process of mixing up the components depending on the consumer request.

#### BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWINGS

Fig. 1: ~~the design of the reservoir in the~~ Fig. 1 shows the construction of the proposed vessel in cross-sectional view as in example 1; the1, wherein the valve is placed on the external part of the container, guide the guide members are made in the ring form of a ring.

Fig. 2: ~~the design of the reservoir in the~~ Fig. 2 shows the construction of the proposed vessel in cross-sectional view as in example 2; according to example 2, wherein the valve is placed on the internal-inner part of the container, the guide members are made in the form of zigzag.

Fig. 3: ~~the design of the reservoir in the~~ Fig. 3 shows the construction of the vessel in cross-sectional view as in example 3; according to example 3, wherein the valve is fixedly connected with cover by fixed connection, the to the cover, the cover is provided with a removable cap is fitted into the cover, cap, the guide members are formed by walls of the container and the end of the valve.

Fig. 4: ~~the design of the reservoir in the~~ Fig. 4 shows the construction of the vessel in cross-sectional view as in example 4; according to example 4, wherein the container is an element of the receptacle, the upper part of the valve is made in the form of a tube.

Fig. 5: ~~the design of the reservoir in the~~ Fig. 5 shows the construction of the vessel in cross-sectional view as in example 5; according to example 5, wherein hydraulic pressure, pressure is used resulting from of the displacement of the valve and the container one from the other, is used relative to each other.

Fig. 6: ~~the design of the declared reservoir in the~~ Fig. 6 shows the construction of the declared vessel in cross-sectional view as in example 6; according to example 6, wherein displacement of the container relative to the valve and the container one from the other results from the indirect action of pressure of the introduced component.

~~Fig. 7: the design of the reservoir in the~~ Fig. 7 shows the construction of the vessel in cross-sectional view ~~as in~~ according to example 7 with the channel for the output of the end product through the valve; ~~the channel is connected~~ valve, connection of the channel with a tube ~~which reaches~~ reaching the bottom part of the receptacle, installation is ~~made of a spring~~ between the container and the valve of a spring group valve.

~~Fig. 8: the design of the declared reservoir in the~~ Fig. 8 shows the construction of the proposed vessel in cross-sectional view ~~as in example 8;~~ according to example 8, wherein the channel intended for the output of the end product is inside the container.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

##### Example № 1. No. 1.

Fig. 1 of the ~~reservoir~~ proposed vessel shows the following elements: the ~~receptacle~~ receptacle (the upper part) - 1 ~~with the~~ with a basic component - 2; the container - 3 ~~with the~~ with an introduced component - 4 and carbon dioxide - 5; the ~~hole~~ opening - 6 in the container 3; the ~~valve~~ valve - 7; the ~~channel~~ channel - 8; the ~~cover~~ cover - 9; the ~~push~~ push bar - 10; the ~~guide~~ guide members - 11 in the form of the ring a ring.

When ~~twisting~~ the cover 9 with detachable ~~connection is wound~~, the ~~reservoir~~ connection, the vessel opens and the pressure in the receptacle 1 becomes ~~equal to the~~ equal to atmospheric pressure; ~~pressure~~, simultaneously the push bar 10 transfers the movement to the container 3 which displaces along the guide members 11 ~~against relative to~~ the valve 7 fixed in the upper part of the receptacle 1. The ~~reservoir~~ vessel is set in position "open", unlinking the ~~hole~~ opening 6 of the container 3 and the valve 7. Under ~~the action of~~ affect of the pressure of the ~~carbon~~ carbon dioxide 5 the introduced component 4 is thrown out in the receptacle 1 through the ~~hole~~ opening 6 of the container 3 and is mixed up with the basic component 2.

\_\_\_\_\_ If the valve 7 opens the ~~hole~~ opening 6 of the container 3 when the cover

with detachable connection 9 is dismantled, ~~there occurs a uncontrolled-an~~  
uncontrolled complete ~~mixing-up~~mixing of component 2 and component 4 occurs  
according to the formula of the manufacturer.

5 In case ~~if~~the container 3 is ~~made from~~made of transparent materials and the valve  
7 closes the ~~hole~~opening 6 of the container 3 when the cover with detachable  
connection 9 is dismantled, ~~there occurs dosed-mixing-up~~dosed mixing of the  
~~components~~components occurs. When necessary ~~portion~~amount of the  
introduced component 4 ~~was chosen~~is selected, the ~~consumer~~user can stop the  
~~process of mixing-up~~mixing process of the components by twisting off the cover  
10 with detachable connection 9 until it is detached. The container 3 and the valve 7  
close the ~~hole~~opening 6 of the container 3.  
      In such a way the ~~consumer can model~~user modifies the parameters of the  
end product just before using it for its intended purpose.  
      After the cover with detachable connection 9 is dismantled, the end-  
15 product can be freely ~~taken out~~released through the channel 8 formed by the  
receptacle 1 and the container 3.

#### Example № 2.No. 2.

Another ~~version~~variant of the ~~reservoir~~proposed vessel differs from the  
~~reservoir shown in example № 1~~vessel according to example No. 1 in particular  
20 form of ~~design~~realization and interaction of the container and the valve. Fig. 2 of  
the ~~reservoir~~proposed vessel shows the following elements: receptacle (the upper  
part) - 1 with the ~~basica~~basic component - 2; the ~~introduced~~introduced component  
- 4; carbon dioxide - 5; the ~~hole~~opening 6 of the container-20; the ~~channel~~channel  
- 8; the ~~cover~~cover with detachable connection - 9; the ~~push~~push bar - 10.

25 This ~~version~~variant differs from ~~version in Example 1~~ in the  
~~following~~variant of example No. 1 in that the guide members - 22 ~~are of the~~have  
a zigzag form, form, and the valve-21 is ~~placed~~arranged on the ~~interior~~inner side  
of the container - 20 which is fixed in the upper part of the receptacle 1.

When being used, the cover with detachable connection 9 transfers the

movement through the push bar 10 to the valve 21 which moves along the guide members 22 of the zigzag form and is displaced in a wave-like manner against relative to the container 20 fixed in the upper part of the receptacle 1. The reservoir-vessel is set in position "open", unlinking the hole-opening 6 of the container 20 from the valve 21.

#### Example №3.No. 3.

Fig. 3 shows a version of the reservoir variant of the vessel for multicomponent products, which differs from version №1 invariant No. 1 in the particular form of design and realization and the relative position of structural the structural elements against each- to each other. Fig. 3 shows shows the following elements: the receptacle receptacle (the upper part) - 1 with the basic basic component - 2; the introduced introduced component - 4; the cover cover - 31, made with the with a removable cap 33, the valve valve - 34, fixedly connected with the to the cover 31 and fitted arranged inside the container - 32, which is the latter fixedly connected to the receptacle 1; the valve valve - 35. The design construction operates similarly to the previously described versions variants. Its basic difference from the above-mentioned designs variants is in the following that the cover with with the detachable connection 31 is fixedly connected to the valve 34, so that when the cover 31 is twisted, the container 32 opens. When the cap 33 is removed removing the cap 33 the end-product is taken out released through the channel 35 without dismounting of the cover 31.

#### Example №4.No. 4.

Fig. 4 shows the version a variant of the reservoir proposed vessel for multicomponent products. This version of reservoir-vessel design of contains the valve - 41, the receptacle receptacle - 1 with the with a basic component - 2, the container container - 42 which is made as an element of the receptacle - 1, the cover cover - 43, the binding binding element - 44, made in the form of the retention pin a clamp, the introduced introduced component - 4, the hole opening - 6 of the container 42, the channel channel-8. The basic difference from the designs

~~in version № 1 to the variants according to variant No. 1~~ is that the container 42 is an element of the receptacle 1, the upper part of the valve 41 is made in the form of a neck. When removing the cover 43 ~~is dismantled~~, the binding element 44 raises the valve 41 above the receptacle 1 ~~that~~ which results in unlinking of the valve 41 and the hole-opening 6 of the container 42. The cover 43 is removed, and the valve 41 is fixed in the top position above the receptacle 1. After mixing ~~upmixing~~ the components the end-product is ~~taken out~~ released through the channel 8 of the valve 41.

#### Example ~~№ 5~~ No. 5.

Fig. 5 shows the ~~version of the reservoir consisting of the following elements:~~ variant of the vessel showing a receptacle (the upper part) - 1 with the ~~basic~~ basic component - 2, the ~~introduced~~ introduced component - 4, the ~~container~~ container 50 with the hole-opening 6; the ~~channel~~ channel - 8; the ~~cover~~ cover with a detachable connection - 9; the ~~push~~ push bar - 10, the ~~valve~~ valve 51, the ~~guide~~ guide members 52 made on the form of a thread; ~~in the upper~~ the upper part of the container 50 ~~there is a fabrication hole~~ is provided with a technological opening - 53. The basic difference ~~from version described in example № 1, consists in the following: there are blades 54~~ to the variant of example No. 1 is that in the container 50 and the valve 51; blades 54 are arranged, one of the ~~blades~~ blades which is connected to the valve 51, and the second is connected to the ~~internal~~ inner part of the container 50. When the cover 9 is twisted, the valve 51 and the hole-opening 6 of the container 50 are ~~disconnected~~ disconnected, simultaneously the introduced component 4 ~~undergoes the action of pressure, created~~ is set under pressure by the blades 54. Under the effect of the ~~hydraulic~~ hydraulic pressure the introduced component 4 is thrown out from the container 50 at a ~~high~~ high flow speed ~~of a stream~~ and is mixed up with the basic component 2.

#### Example ~~№ 6~~ No. 6.

Fig. 6 shows the ~~version of the reservoir~~variant of the proposed vessel with the ~~showing a~~ receptacle (the upper part) - 1 with the ~~basica~~ basic component - 2; the ~~container~~container - 60 with the ~~introduce~~an introduced component - 4 and carbon dioxide - 5; the ~~hole~~opening 6 in the ~~container~~container - 60; the ~~valve~~valve - 61; the ~~channel~~channel - 8; a cover with detachable connection - 9 the ~~internal~~inner part of which is flat; the ~~push~~push bar - 10; the ~~guide~~guide members - 62.

~~The design of the reservoir of this version~~The present variant of the construction of the vessel differs from the ~~one of the version № 1~~variant No. 1 in the ~~a different~~ position and the form of the ~~container 60 and~~container 60, the valve 61; the ~~guide~~guide members 62 form a part of the receptacle 1, the introduced component 4 is under pressure of ~~carbon~~from carbon dioxide 5, the push bar 10 ~~is in a~~ is represented by a flat part of the cover 9 and presses the container 60 to the valve 61. ~~When~~Thus, when being used, the cover with detachable connection 9 ~~raises~~raises above the receptacle 1 and through the push bar 10 reduces the influence to the container 60 which is under the ~~positive~~excess pressure of the component 5; ~~the~~the introduced component 4 ~~lifts~~raises the container 60 along the guide members 62 ~~against~~relative to the valve 61. The ~~reservoir-vessel~~ is set in position «open», unlinking the ~~hole~~opening 6 of the container 60 and the valve 61.

#### Example ~~№ 7~~No. 7.

Fig. 7 shows the ~~version of the reservoir~~variant of the proposed vessel for multicomponent products ~~which consists of the following elements: the showing:~~ receptacle (the upper part) - 1 with the ~~basica~~ basic component - 2; the ~~container~~container 70 with the ~~introduce~~introduced component - 4; the ~~hole~~opening 6 of ~~the in the~~ container-70; the ~~channel~~channel - 8; the ~~binding~~binding element - 10. ~~Except for the different if its form~~ container 70 this version differs from the ~~version № 1~~ in the following: ~~it~~ As distinct from variant No. 1 the present variant in addition to the different form of the container 70

contains ~~the valve~~ valve 71, ~~the cover~~ cover 79 with ~~the detachable~~ detachable connection made in the form of ~~the retention pin~~, ~~the~~ clamp, guide members 72, ~~the spring group~~ spring 74, ~~the tube~~ tube 73 connected to ~~their~~ connection to a channel 8. The container 70 and the valve 71 are located above the receptacle ~~4;~~ the 1, and the guide members 72 are made as ~~a part~~ part of the sides of the valve 71 and the container 70. The channel for the output of the end product 8 passes through the tube 73 and the valve 71. When ~~being used~~, in use, through the binding element 10 the cover with detachable connection 79 transfers the movement to the valve 71 ~~through the binding element 10~~. The valve 71 which under the action 71, which under the influence of the cover 79 and the spring group ~~74~~ goes ~~moves~~ along the guide members 72 and ~~moves upwards against~~ displaces upwardly relative to the container 70. The ~~reservoir vessel~~ is set in position «open», unlinking the ~~hole opening~~ 6 of the container 70 and the valve 71.

#### Example ~~№ 8~~ No. 8.

Fig. 8 shows the ~~version of the reservoir~~ variant of the proposed vessel for multicomponent products ~~which consists of the following elements: the showing:~~ a receptacle (the upper part) - 1 with the basic basic component - 2; the container 80 made with ~~the open~~ an open upper part, ~~the introduced~~ an introduced component - 4; ~~the hole opening~~ - 6 of the container 80; ~~the cover~~ cover with detachable connection - 9; ~~the push~~ push bar - 10.

~~This version differs from the version № 1 in the following: it~~ As distinct from variant No. 1 the present variant contains contains a different in its form container 80, ~~the valve~~ valve 81, ~~the guide members 82 and the~~ guide members 82, introduced component 4 in the form of a powder. When ~~being used~~, in use the cover ~~with~~ with the detachable connection 9 transfers the movement through the push bar 10 to the container 80 which ~~goes moves~~ along the guide members 82, which ~~give provide~~ only rotational movement, and ~~moves against~~ displaces relative to the valve 81. The ~~reservoir vessel~~ is set in position «open», unlinking the ~~hole opening~~ 6 of the container 80 and the valve 81.



The above-mentioned ~~versions-variants~~ of the ~~design-construction~~ of the ~~reservoir-vessel~~ for multicomponent products operate similarly to each other. Other possible ~~designs-variants~~ of the ~~offered-reservoir~~ proposed vessel are reduced to different combinations of ~~the ways~~ ways of connection of the ~~container~~,  
5 ~~the container and the~~ valve, and the guide members.

#### Industrial utilization Applicability

The use of the ~~reservoir-vessel~~ for multicomponent products will ~~make it possible to improve~~ provide for improvement of the quality of ~~such kind of reservoirs~~ the latter due to ~~the new~~ new functional capabilities: reliability of a  
10 ~~design~~ construction; easy and safe depressurization of the container with the introduced component; reduction of actions to activate the ~~process of mixing~~ mixing process up; ~~taking out~~ release of the end product without the removal of the container.

~~Besides, there appeared~~ Furthermore, the appearance of the new functional capabilities ~~providing~~ providing for management of the ~~process of mixing up~~ mixing process of the ~~components~~; ~~they~~ components will allow the ~~consumer~~ user to model parameters of the end product just before using it for its intended purpose, taking into account particular circumstances and conditions.